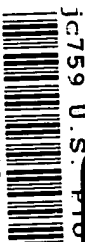


02/11/02

Please type a plus sign (+) inside this box ☒Approved for use through 10/31/2002. OMB 0651-0032
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PTO/SB/05 (03/01)

**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	62004-1970
First Inventor	Mule', et al.
Title	Optical waveguides with embedded air-gap cladding layer and methods of fabrication thereof
Express Mail Label No.	EL 789316918 US

APPLICATION ELEMENTS

See MPEP Chapter 600 concerning utility patent application contents

ADDRESS TO:Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231☐ APPLICANT REQUESTS EARLY PUBLICATION UNDER 37 CFR 1.219 (additional fee)

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original, and a duplicate for fee processing)
2. ☐ Applicant claims small entity status. See CFR 1.27
3. ☒ Specification (preferred arrangement set forth below) [Total Pages **22**]
- Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed. Sponsored R&D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 USC 113) [Total Sheets **6**]
5. Oath or Declaration [Total Pages **3**]
- a. ☒ Newly Executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR §1.63(d))
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
named in the prior application,
see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☒ Application Data Sheet. See 37 CFR 1.76
- Assignee Name and Address (if applicable)
**Georgia Tech Research Corporation
505 Tenth Street
Atlanta, Georgia 30332**

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Copy (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ Paper
- c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & Documents(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 **15** Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: /**Prior application information: Examiner****Group / Art Unit:**

For CONTINUATION OR DIVISIONAL APPS only: the entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. This incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

18. CORRESPONDENCE ADDRESS

Customer Number or Bar Code Label

24504

(Insert Customer No. or Attach bar code label here)



Correspondence address below

NAME	Christopher B. Linder Thomas, Kayden, Horstemyer & Risley, L.L.P.		
ADDRESS	100 Galleria Parkway Suite 1750		
CITY	Atlanta	STATE	Georgia
COUNTRY	U.S.A.	TELEPHONE	770-933-9500
		ZIP CODE	30339-5948
		FAX	770-951-0933

Name (Print/Type)	Christopher B. Linder	Registration No. (Attorney/Agent)	47,751
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FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

Complete If Known

Application Number	To be assigned
Filing Date	February 11, 2002
First Named Inventor	Mule, et al.
Examiner Name	To be assigned
Group / Art Unit	To be assigned
Attorney Docket No.	62004-1970

TOTAL AMOUNT OF PAYMENT (\$)**908.00**

METHOD OF PAYMENT

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit Account Number **20-0778**

Deposit Account Name **Thomas Kayden Horstemeyer Risley LLP**

- ☒ Charge any Additional Fee required under 37 C.F.R. 1.16 and 1.17.

☐ Applicant claims small entity status. See 37 CFR 1.27.

2. ☒ Payment Enclosed:
☐ Check ☐ Money Order ☒ Credit Card ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
101	740	201	370	Utility filing fee	\$740
106	330	206	165	Design filing fee	\$
107	510	207	255	Plant filing fee	\$
108	740	208	370	Reissue filing fee	\$
114	160	214	80	Provisional filing fee	\$
SUBTOTAL (1)					(\$) 740

2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
13	-20** = 0	18.00	0
Independent Claims	5	-3** = 2	84.00 = 168
Multiple Dependent		140.00	0

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description
103	18	203	9	Claims in excess of 20
102	84	202	42	Independent Claims in excess of 3
104	280	204	140	Multiple dependent claims in excess of 3
109	84	209	42	**Reissue independent claims over original patent
110	18	210	9	**Reissue claims in excess of 20 and over original patent

** or number previously paid, if greater; For Reissues, see above

SUBTOTAL (2) (\$)**168.00**

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for ex-parte reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension of time within second month	
117	920	217	460	Extension of time within third month	
118	1,440	218	720	Extension of time within fourth month	
128	1,960	228	980	Extension of time within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Processing fee under 37 CFR 1.17(q)	
126	180	126	180	Submission of Information Disclosure Stmt.	
581	40	581	40	Recording each patent assignment per property (time number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	
Other fee (specify)					

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)**0**

SUBMITTED BY

Typed or Printed Name

Christopher B. Linder

Registration No. **47,751**
(Attorney/Agent)

Telephone Number

770-933-9500

Signature

Christopher B. Linder

Date

2/11/02

Deposit Account User ID

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: **Mule', et al.**For: **OPTICAL WAVEGUIDES WITH EMBEDDED AIR-GAP CLADDING LAYER
AND METHODS OF FABRICATION THEREOF****CERTIFICATE OF EXPRESS MAIL**Assistant Commissioner for Patents
BOX: Patent Application
Washington, D.C. 20231

Sir:

Enclosed for filing in the above case are the following documents:

Return Postcard
Utility Patent Application Transmittal Page
Fee Transmittal Page
Utility Patent Application Consisting Of:
16 Pages of Specification
5 Pages of Claims (Claims 1-13)
1 Page of Abstract
6 Pages of Formal Drawings (Figs. 1A-6H)
Declaration (Unexecuted)
Credit Card Authorization in the amount of \$908.00
Information Disclosure Statement
IDS Form 1449 With 15 Cited References

Further, the Commissioner is authorized to charge Deposit Account No. 20-0778 for any additional fees required. The Commissioner is requested to credit any excess fee paid to Deposit Account No. 20-0778.

Respectfully submitted,

Christopher B. Linder, Reg. No. 47,751**THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**100 Galleria Parkway, N.W.
Suite 1750
Atlanta, Georgia 30339-5948Our Docket No: **62004-1970**

I hereby certify that all correspondence listed above are being deposited for delivery to the above addressee, with the United States Postal Service "**EXPRESS MAIL POST OFFICE TO ADDRESSEE**" service under 37 CFR §1.10 on the date indicated below:

The envelope has been given U.S. Postal Service "Express Mail Post Office To Addressee" Package # **EL 789316918 US**.

Date: 2/11/02
Jo Bryan